

TABLE 1—TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS—Continued

Technology code	Description of technology-based standards
WTRRX:	Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.

NOTE 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in § 268.42, Table 2 by indicating the five letter technology code that must be applied first, then the designation "fb." (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

NOTE 2: When more than one technology (or treatment train) are specified as *alternative* treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word "OR". This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or specified in Table 1 of § 268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or in Table 1 of § 268.45 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

(c) As an alternative to the otherwise applicable subpart D treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

(1) The lab packs comply with the applicable provisions of 40 CFR 264.316 and 40 CFR 265.316;

(2) The lab pack does not contain any of the wastes listed in Appendix IV to part 268;

(3) The lab packs are incinerated in accordance with the requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O; and

(4) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in subpart D of this part.

(d) Radioactive hazardous mixed wastes are subject to the treatment standards in § 268.40. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by EPA waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in § 268.45.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 25790, July 8, 1987; 55 FR 22692, June 1, 1990; 56 FR 3884, Jan. 31, 1991; 57 FR 8089, Mar. 6, 1992; 57 FR 37273, Aug. 18, 1992; 58 FR 29885, May 24, 1993; 59 FR 31552, June 20, 1994; 59 FR 48103, Sept. 19, 1994; 60 FR 302, Jan. 3, 1995; 61 FR 15654, Apr. 8, 1996; 62 FR 26025, May 12, 1997; 63 FR 28738, May 26, 1998; 71 FR 40278, July 14, 2006; 73 FR 27767, May 14, 2008]

§ 268.43 Treatment standards expressed as waste concentrations.

For the requirements previously found in this section and for treatment standards in Table CCW—Constituent Concentrations in Wastes, refer to § 268.40.

[59 FR 48103, Sept. 19, 1994]

§ 268.44 Variance from a treatment standard.

(a) Based on a petition filed by a generator or treater of hazardous waste, the Administrator may approve a variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(b) Each petition must be submitted in accordance with the procedures in § 260.20.

(c) Each petition must include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples which he may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices.

(e) The Administrator will give public notice in the FEDERAL REGISTER of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard will be published in the FEDERAL REGISTER.

(f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis requirements for restricted wastes found under § 268.7.

(g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(h) Based on a petition filed by a generator or treater of hazardous waste, the Administrator or his or her delegated representative may approve a site-specific variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

Environmental Protection Agency

§ 268.44

(3) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (i.e., lower than) the concentrations necessary to minimize short- and long-term threats to human health and the environment. Treatment variances approved under this paragraph must:

(i) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:

(A) For carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from 10^{-4} to 10^{-6} ; and

(B) For constituents with non-carcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime.

(ii) Not consider post-land-disposal controls.

(4) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (i.e., lower than) natural background concentrations at the site where the contaminated soil will land disposed.

(5) Public notice and a reasonable opportunity for public comment must be provided before granting or denying a petition.

(i) Each application for a site-specific variance from a treatment standard must include the information in § 260.20(b)(1)–(4);

(j) After receiving an application for a site-specific variance from a treatment standard, the Assistant Administrator, or his delegated representative, may request any additional information or samples which may be required to evaluate the application.

(k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard must comply with the waste analysis requirements for restricted wastes found under § 268.7.

(l) During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(m) For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to 40 CFR 266.20 through 266.23.

(n) [Reserved]

(o) The following facilities are excluded from the treatment standards under § 268.40, and are subject to the following constituent concentrations:

TABLE—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40

Facility name ¹ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/l)	Notes	Concentration (mg/kg)	Notes
Craftsman Plating and Tinning, Corp., Chicago, IL.	F006	Table CCWE in 268.40.	Cyanides (Total).	1.2	(²)	1800	(⁴)
			Cyanides (Amenable).	.86	(² and ³)	30	(⁴)
			Cadmium	1.6		NA	
			Chromium .....	.32		NA	
			Lead .....	.040		NA	
			Nickel .....	.44		NA	
CWM Chemical Services, LLC, Model City, New York.	K088 ⁹	Standards under § 268.40.	Arsenic	1.4	NA	5.0 mg/L TCLP	NA

TABLE—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40—Continued

Facility name ¹ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/l)	Notes	Concentration (mg/kg)	Notes
DuPont Environmental Treatment Chambers Works, Deepwater, NJ.	F039	Standards under § 268.40.	1,3-phenylene-diamine 1,3-PDA.	NA	NA	CMBST; CHOXD fb BODG or CARBN; or BODG fb CARBN 5.0 mg/L TCLP	(¹³)
Dupont Environmental Treatment—Chambers Works Wastewater Treatment Plant, Deepwater, NJ ⁸ .	K088	Standards under § 268.40.	Arsenic	1.4	NA	5.0 mg/L TCLP	NA
EnergySolutions LLC, Clive, UT (¹⁴).	P- and U-listed hazardous waste requiring CMBST	Standards under 268.40.	NA	NA	NA	CMBST or VTD	NA
Guardian Industries Jefferson Hills, PA (6), (11), and (12).	D010 Standards under 268.40	Selenium	NA	NA	11 mg/L TCLP	NA	
Owens Brockway Glass Container Company, Vernon, CA ⁶ .	D010	Standards under § 268.40.	Selenium	NA	NA	51 mg/L TCLP	(¹⁵)
Owens Brockway Glass Container Company, Vernon, CA ⁶ .	D010	Standards under § 268.40.	Selenium	NA	NA	59 mg/L TCLP	(¹⁶)
Northwestern Plating Works, Inc., Chicago, IL.	F006	Table CCWE in 268.40.	Cyanides (Total).	1.2	(² and ³)	970	(⁴)
			Cyanides (Amenable).	.86	(²)	30	(⁴)
			Cadmium	1.6		NA	
			Chromium .....	.32		NA	
			Lead .....	.040		NA	
			Nickel .....	.44		NA	
St. Gobain Containers, El Monte, CA ^{5,7} .	D010	Standards under § 268.40.	Selenium	NA	NA	25 mg/L TCLP	NA
U.S. Ecology Idaho, Incorporated, Grandview, Idaho.	K088 ¹⁰	Standards under § 268.40.	Arsenic	1.4	NA	5.0 mg/L TCLP	NA

(¹)—A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

(²)—Cyanide Wastewater Standards for F006 are based on analysis of composite samples.

(³)—These facilities must comply with 0.86 mg/l for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with 40 CFR § 268.7.a.4 for appropriate monitoring frequency consistent with the facilities' waste analysis plan.

(⁴)—Cyanide nonwastewaters are analyzed using SW-846 Method 9010C or 9012B, as incorporated by reference in § 260.11 of this chapter, sample size 10 grams, distillation time, 1 hour and 15 minutes.

(⁵)—Alternative D010 selenium standard only applies to dry scrubber solid from glass manufacturing wastes.

(⁶)—Alternative D010 selenium standard only applies to electrostatic precipitator dust generated during glass manufacturing operations.

(⁷)—D010 wastes generated by this facility must be treated by Chemical Waste Management, Inc. at its Kettleman Hills facility in Kettleman City, California.

(⁸)—Dupont Environmental Treatment-Chambers Works must dispose of this waste in their on-site Subtitle C hazardous waste landfill.

(⁹)—This treatment standard applies only to K088-derived bag house dust, incinerator ash, and filtercake at this facility.

(¹⁰)—This treatment standard applies only to K088-derived air emission control dust generated by this facility.

(¹¹)—D010 wastes generated by this facility may be treated by Heritage Environmental Services, LLC at their RCRA permitted treatment facility in Indianapolis, Indiana or by Chemical Waste Management, Chemical Services Inc. at their RCRA permitted treatment facility in Model City, New York.

(¹²)—D010 waste generated by this facility may be treated by Chemical Waste Management, Chemical Services, LLC. at their treatment facility in Model City, New York.

(¹³)—This treatment standard applies to 1,3-PDA in biosludge from treatment of F039.

(¹⁴)—This site-specific treatment variance applies only to solid treatment residue resulting from the vacuum thermal desorption (VTD) of P- and U-listed hazardous waste containing radioactive contamination ("mixed waste") at the EnergySolutions' LLC facility in Clive, Utah that otherwise requires CMBST as the LDR treatment standard. Once the P- and U-listed mixed waste are treated using VTD, the solid treatment residue can be land disposed at EnergySolutions' onsite RCRA permitted mixed waste landfill without further treatment. This treatment variance is conditioned on EnergySolutions' complying with a Waste Family Demonstration Testing Plan specifically addressing the treatment of these P- and U-listed wastes, with this plan being implemented through a RCRA Part B permit modification for the VTD unit.

(¹⁵) This alternative standard applies only to D010 wastes generated by this facility and treated by Chemical Waste Management, Inc. at its Kettleman Hills facility in Kettleman City, California.

Environmental Protection Agency

§ 268.45

¹⁶ This alternative standard applies only to D010 wastes generated by this facility and treated by U.S. Ecology Nevada at its facility in Beatty, Nevada. This alternative treatment standard is conditioned on the waste-to-reagent ratio not exceeding 1 to 0.45.

NOTE: NA means Not Applicable.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 21017, June 4, 1987; 53 FR 31221, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989; 56 FR 12355, Mar. 25, 1991; 61 FR 55727, Oct. 28, 1996; 62 FR 26025, May 12, 1997; 62 FR 64509, Dec. 5, 1997; 63 FR 28738, May 26, 1998; 64 FR 28391, May 26, 1999; 66 FR 33890, June 26, 2001; 67 FR 35928, May 22, 2002; 67 FR 36818, May 28, 2002; 69 FR 6575, Feb. 11, 2004; 69 FR 67653, Nov. 19, 2004; 70 FR 34589, June 14, 2005; 70 FR 44511, Aug. 3, 2005; 71 FR 6212, Feb. 7, 2006; 71 FR 40279, July 14, 2006; 73 FR 27767, May 14, 2008; 77 FR 50626, Aug. 22, 2012]

§ 268.45 Treatment standards for hazardous debris.

(a) *Treatment standards.* Hazardous debris must be treated prior to land disposal as follows unless EPA determines under § 261.3(f)(2) of this chapter that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subpart for the waste contaminating the debris:

(1) *General.* Hazardous debris must be treated for each “contaminant subject to treatment” defined by paragraph (b) of this section using the technology or technologies identified in Table 1 of this section.

(2) *Characteristic debris.* Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under §§ 261.21, 261.22, and 261.23 of this chapter, respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of this section.

(3) *Mixtures of debris types.* The treatment standards of Table 1 in this section must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(4) *Mixtures of contaminant types.* Debris that is contaminated with two or more contaminants subject to treatment identified under paragraph (b) of this section must be treated for each contaminant using one or more treatment technologies identified in Table 1 of this section. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(5) *Waste PCBs.* Hazardous debris that is also a waste PCB under 40 CFR part 761 is subject to the requirements of either 40 CFR part 761 or the require-

ments of this section, whichever are more stringent.

(b) *Contaminants subject to treatment.* Hazardous debris must be treated for each “contaminant subject to treatment.” The contaminants subject to treatment must be determined as follows:

(1) *Toxicity characteristic debris.* The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by § 261.24 of this chapter are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(2) *Debris contaminated with listed waste.* The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under § 268.40.

(3) *Cyanide reactive debris.* Hazardous debris that is reactive because of cyanide must be treated for cyanide.

(c) *Conditioned exclusion of treated debris.* Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of this section and that does not exhibit a characteristic of hazardous waste identified under subpart C, part 261, of this chapter after treatment is not a hazardous waste and need not be managed in a subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and must be managed in a subtitle C facility.

(d) *Treatment residuals*—(1) *General requirements.* Except as provided by paragraphs (d)(2) and (d)(4) of this section:

(i) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and